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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/767,875

Filing Date: January 29, 2004

Appellant(s): KIM ET AL.

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David A. Plumley  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 5, 2008 appealing from the Office action mailed November 26, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,618,640	IDOTA et al.	4-1997
5,753,387	TAKAMI et al.	5-1998

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Interpretation***

Concerning the limitations of claims 10 & 12 drawn to the amount of gas generated during initial charging, these limitations are product-by-process claims since the product is claimed as a result of a process, namely an initial charging process. So even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (MPEP 2113). The charging of the battery is part of the process of making the battery.

***Claim Rejections - 35 USC § 102/103***

Claims 10 & 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US Patent 5,618,640 (Idota).

Idota discloses a rechargeable lithium battery with a negative electrode consisting essentially of a carbonaceous material as the negative electrode active material and an aqueous binder mixture consisting essentially of carboxymethyl cellulose and styrene-butadiene rubber (1:15-35, 13:40-66, 20:24-27). A separator is used in the completed assembly of the battery (Fig. 2; 2:55-62). Since the battery is

made in a similar manner with similar components as the claimed invention and the amount of gas generated is a property of the components of the battery, the amount of gas discharged by the battery of Idota is inherently the same as the claimed invention.

#### **(10) Response to Argument**

Appellant's arguments center on two points. First, the product-by-process interpretation is allegedly invalid and second, the prior art reference of Idota teaches away from a carbonaceous negative electrode.

Regarding the product-by-process limitation, on page 3 of brief appellant states, "Rather, the claims recite a property of the negative electrode or lithium battery upon use of the battery. In particular, initial charging of the lithium battery is only conducted after the battery is fabricated, and the present claims recite a property of the battery (or negative electrode) after fabrication and use of the end product. No process steps for the fabrication of the battery or negative electrode are recited, and therefore, the battery and negative electrode are not claimed as a result of any process, as required by M.P.E.P. §2173.05(p) for characterization as a product-by-process claim." (Emphasis added)

As clearly pointed out by appellant, the gas generation is a property of the battery or negative electrode. Since the claimed invention is equivalent to the disclosed negative electrode and battery of Idota, the properties are inherently the same. Appellant has not provided any reasoning or evidence to the contrary. Appellant also alleges no process steps for the fabrication of the battery are recited. However, the

claims recite, "wherein during charging of the rechargeable lithium battery..." The claims do not recite any limitations regarding the use of the battery or negative electrode. The limitation "wherein during the charging of the rechargeable lithium battery..." is a process step; it is part of the process of making the battery so it can be used. Therefore, the product, a negative electrode or a rechargeable lithium battery, claimed by the process, "wherein during the charging of the rechargeable lithium battery..." is a product-by-process claim. As such, while the process is considered, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. Furthermore, the gas generation is a property of the battery or negative electrode (brief, pg. 3) and the prior art meets the limitations of the claimed invention. Therefore, the prior art inherently meets the limitations drawn to the gas generation.

Regarding appellant's arguments toward the prior art allegedly teaching away from a negative electrode consisting essentially of a carbonaceous electrode, the Idota reference does not teach away from using a carbonaceous negative electrode. Idota teaches negative electrodes consisting essentially of carbonaceous material are well-known in the art (1:10-32). Idota also teaches if the battery is abused (i.e., overcharge or rapid charge) then the battery efficiency is affected. So, the prior art teaches a way of improving on the well-known carbonaceous negative electrode. The teaching of an improved negative electrode does not equate to a teaching away. "Disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. A known or obvious composition does not

become patentable simply because it has been described as somewhat inferior to some other product for the same use." (MPEP 2123 (II)) "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain." (MPEP 2123 (I))

Inclusion of a binder in the electrode material is also well-known in the art and taught by Idota. The binder acts just as the name implies, it binds the materials together. The binder taught by Idota consists essentially of a butadiene based rubber and a cellulose based compound (13:58-66, 14:35-48). These two binding materials are exemplified as the binding materials for a negative electrode (Example A-6, 20:20-30). Therefore, Idota teaches a rechargeable lithium battery comprising a negative electrode consisting essentially of a carbonaceous material and a binder consisting essentially of a butadiene based rubber and a cellulose based compound. "A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. The question whether a reference "teaches away" from the invention is inapplicable to an anticipation analysis. *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998)" (MPEP 2131.04)

Appellant alleges because Idota doesn't discuss the binder along with the teaching of a carbonaceous material for the negative electrode in the background section, then the claimed invention is not disclosed because no suggestion or motivation to combine is provided. As discussed above, the inclusion of a binder in the electrode material is extremely well-known in the art and is taught by Idota. Therefore,

the reference anticipates the claimed invention. The rejection based on the prior art reference is not a combination of random elements as alleged by appellant. The prior art clearly teaches using a negative electrode material with a binder. The binder is the same as claimed and the negative electrode material is taught to include only carbonaceous materials.

Appellant alleges the facts of *In re Kotzab* are similar to the present case. However, the two cases have nothing to do with each other since the *In re Kotzab* deals with a method of injection molding and the current case deals with a negative electrode and a battery. Furthermore, the *In re Kotzab* rejection was based on extrapolating the teaching of one system controlling multiple valves meaning one sensor controlling multiple valves. The instant case deals nothing with these issues since it is a product case not a method case and since all the elements of the instant claimed invention are taught, taught as equivalents and taught as used together.

The following two references are included as supporting evidence for what is well-known in the art. First, Japanese Publication 2001-023630 (Hirata), which was provided by appellant on an IDS submitted after the last Final Office action of November 26, 2007 but before the Appeal Brief, and has been considered for this Examiner's Answer. Hirata teaches it is well-known in the art to have a lithium rechargeable battery comprising a negative electrode consisting essentially of carbonaceous material and a binder (Abstract). The second evidentiary reference is US 5,753,387 (Takami). Takami teaches a lithium rechargeable battery comprising a negative electrode consisting

essentially of carbonaceous material and a binder consisting essentially of butadiene and cellulose (Abstract; 17:49-55).

Therefore, as discussed in the rejections and in the arguments, the Idota reference teaches the product of the claimed invention, which is well-known in the art, as presented by the evidentiary references. Since the gas generation is a product of the battery and the claimed battery is taught by Idota, the gas generation is inherently the same. Appellant has not provided any evidence to the contrary. As such the claimed invention is anticipated by Idota.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Keith Walker/

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